Ten courses are required for the EM degree, at least three of which must be 700-level. They must be completed within five years.

Five of Seven Core Courses are Required:
- 595.460 – Introduction to Project Management
- 595.465 – Communications in Technical Organizations
- 595.466 – Financial and Contract Management
- 595.731 – Business Law for Technical Professionals
- 595.762 – Management of Technical Organizations
- 595.781 – Executive Technical Leadership
- 595.793 – Applied Innovation for Technical Professionals

Thirteen Technical Concentrations are Offered. The student must take five courses in their chosen concentration. The requirements vary between concentrations and the student should consult the EP catalog for specific information. All courses must be approved by the concentration advisor. The EM Technical Concentrations are:
- Applied and Computational Mathematics
- Applied Biomedical Engineering
- Applied Physics
- Communications, Controls & Signal Processing
- Computer Engineering
- Computer Science
- Cybersecurity
- Information Systems Engineering
- Materials Science & Engineering
- Mechanical Engineering
- Optics and Photonics
- RF & Microwave Engineering
- Structural Engineering

EM CORE COURSES SCHEDULE

<table>
<thead>
<tr>
<th>Number</th>
<th>Required EM Courses (Choose 5)</th>
<th>Working Knowledge</th>
<th>APL</th>
<th>Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>595.460</td>
<td>Introduction to Project Management *</td>
<td>None</td>
<td>X</td>
<td>Fall</td>
</tr>
<tr>
<td>595.465</td>
<td>Communications in Technical Organizations</td>
<td>460 or 461</td>
<td>X</td>
<td>Spr</td>
</tr>
<tr>
<td>595.466</td>
<td>Financial and Contract Management</td>
<td>None</td>
<td>X</td>
<td>All</td>
</tr>
<tr>
<td>595.731</td>
<td>Business Law for Technical Professionals</td>
<td>None</td>
<td></td>
<td>All</td>
</tr>
<tr>
<td>595.762</td>
<td>Management of Technical Organizations</td>
<td>460, 463, 464, 465, 466</td>
<td>EVEN</td>
<td>Fall / Spring</td>
</tr>
<tr>
<td>595.781</td>
<td>Executive Technical Leadership *</td>
<td>460, 463, 465, 466</td>
<td>X</td>
<td>Fall</td>
</tr>
<tr>
<td>595.793</td>
<td>Applied Innovation for Technical Professionals *</td>
<td>None</td>
<td>EVEN</td>
<td>Fall</td>
</tr>
</tbody>
</table>

- **Schedule** below should be used for your program planning. Future changes will be included in schedule updates, which will be issued as necessary.
- **Working Knowledge:** Although no prerequisites are required to take EM courses it is strongly recommended that the student achieve this level of knowledge prior to registering for the course.
- **Electives:** There are no elective options for the EM core courses. Five of the seven core courses can be chosen by the student. Course substitutions can be made at the discretion of the program chair.
- Check the website, [http://ep.jhu.edu/](http://ep.jhu.edu/), for course offerings each semester. New courses may be added or changes made to the schedule below. Enroll early as many of the courses will fill.
- Course offerings vary by location, semester or format. You may take courses at any campus or any semester they are offered. ODD/EVEN indicates the course is given in odd or even years.
- **Course Cancellations** for insufficient enrollment. Consult the course schedule online each semester. If a course you planned to take is not listed in this schedule, consult your advisor.
- **Virtual Live** courses are indicated with an asterisk (*).